EXHIBIT A

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

BARBARA STROUGO, Individually and on Behalf of All Others Similarly Situated, Plaintiff(s), v. BARCLAYS PLC, BARCLAYS CAPITAL, INC., ROBERT DIAMOND, ANTONY JENKINS, CHRISTOPHER LUCAS, TUSHAR MORZARIA, and WILLIAM WHITE, Defendants.	**Case No. 14-cv-5797 (SAS)**

EXPERT REBUTTAL REPORT OF ZACHARY NYE, PH.D.

October 26, 2015

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I. Background and Qualifications

1. Previously in this matter, I provided the Expert Report of Zachary Nye, Ph.D., dated July 24, 2015 (the "Nye Report"). In the Nye Report, I opined that the American Depositary Shares ("ADSs") of Barclays PLC ("Barclays" or the "Company"), which were listed on the New York Stock Exchange ("NYSE") under the ticker symbol "BCS," traded in an efficient market throughout the period August 2, 2011 through June 25, 2014, inclusive (the "Class Period").[1] As part of my analysis, I concluded that the market for Barclays' ordinary shares, which were listed on the London Stock Exchange ("LSE") under the ticker symbol "BARC" (the "London shares"), traded in an efficient market throughout the Class Period.[2] I also opined that my event study demonstrates the price impact of the alleged misrepresentations described in the Complaint,[3] and that damages for investors who purchased Barclays' ADSs during the Class Period can be calculated using a method that is common to the class.[4] I provided expert testimony in this matter on August 11, 2015 (the "Nye Deposition").

2. My current hourly rate is $425. I have received assistance from individuals at SCG, who worked under my direction; their fees charged for this project are their standard hourly rates.

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[1] Nye Report, §VI.

[2] *Id.*

[3] Specifically, Barclays' shares experienced a statistically significant company-specific price decline on June 26, 2014 in response to the New York Attorney General's announcement (after market close on June 25, 2014) of a lawsuit arising from the operation of Barclays' dark pool. Net of market and industry effects that day, the ADSs declined -7.20% (with a *t*-statistic of -5.72), while the London shares suffered a decline of -6.33% (with a *t*-statistic of -5.05). If the *t*-statistic is greater than or equal to 1.97 or less than or equal to -1.97, the difference between the two returns is significantly different from zero at the 5% level of significance. (*See* Nye Report, ¶74.)

[4] Nye Report, §VIII.

Neither my compensation nor that of any individual at SCG is contingent on the outcome of this litigation.

II. Scope of Engagement

3. I have been asked by Counsel for Plaintiffs in this matter to provide opinions in response to the Declaration of Christopher M. James, dated September 11, 2015 (the "James Report"). I also have been asked to address certain portions of Defendants' Memorandum of Law in Opposition to Plaintiffs' Motion for Class Certification, dated September 11, 2015 ("Defendants' Opposition to Class Certification"), that pertain to the opinions contained in the Nye Report.

III. Bases for Opinions

4. My opinions are based upon my professional knowledge and experience, my review of documents and information relevant to this matter, and the analyses described in this report and its exhibits. Documents, data, and other information that I have relied upon as bases for my opinions are cited in this report and its exhibits. Such documents and information are typically relied upon by financial experts in securities class actions and by financial economists in their research.

5. Counsel for Plaintiffs has informed me that the record in this matter continues to be developed. I expect to review additional facts that may become available through discovery as well as the reports and depositions of other expert witnesses. The opinions offered in this report are subject to refinement or revision based on continuing analysis of the documents and information listed above, as well as new or additional information that may be provided to or obtained by me in the course of this matter.

IV. Summary of Opinions

6. In the Nye Report, I examined eight factors commonly considered by experts when examining market efficiency of a security.[5] I also conducted a comparison of trading venues for Barclays' ADSs and London shares, demonstrating that the market for Barclays' stock was efficient enough to ensure price parity throughout each day of the Class Period. Notably, Dr. James does not opine on the market efficiency of either Barclays' ADSs or London shares because, as he has testified, he has not performed the requisite analysis.[6] Of the market efficiency factors considered in the Nye Report, Dr. James addresses only one, *Cammer* Factor 5.[7] In fact, Dr. James agrees that the other factors examined in the Nye Report are "conditions that are conducive to market efficiency" and he has no disagreement with my findings with respect to these factors.[8, 9] Dr. James also adopts and relies upon the regression models

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[5] Nye Report, ¶¶26, 27, The factors considered are: (i) whether the security trades at a large weekly volume; (ii) whether analysts follow and report on the security; (iii) whether the security has market makers and whether there is a potential for arbitrage activity; (iv) whether the company is eligible to file SEC Form S-3; (v) whether there are empirical facts showing a cause-and-effect relationship between unexpected corporate events or financial information releases, and an immediate response in the security's price; (vi) the company's market capitalization; (vii) the security's public float; and (viiI) the degree of autocorrelation present in the security's returns.

[6] James Report, ¶7; Deposition of Christopher M. James, October 22, 2015 (the "James Deposition"), pp. 81, 82, 85, 97.

[7] James Report, ¶19.

[8] James Deposition pp. 71, 72. Dr. James' states that "the first four *Cammer* factors and the additional three factors that Dr. Nye considers are factors that are generally observed in efficient markets, but are not direct evidence of market efficiency." (James Report, ¶19)

[9] In contrast to his current stance that market efficiency can only be assessed via event study, Dr. James has previously opined on market efficiency without conducting an event study. Specifically, in *Oracle*, Dr. James provided an affirmative opinion on market efficiency which was based solely on the availability of information to market participants:

underlying my event studies of the ADSs and London shares.[10] As explained below, the methodologies used in the Nye Report are reliable and consistent with the standards of my profession, and a close examination of the relevant facts and data reveal that Defendants' criticisms are unfounded.

7. The opinions contained in the James Report and Defendants' Opposition to Class Certification do not undermine my conclusion that the markets for Barclays ADSs and London shares were efficient throughout the Class Period. A summary of my response to Defendants' opinions follows:

a. The event study methodology used in the Nye Report is reliable and consistent with the standards of my profession. It is the same method that I and other expert economists have employed in other securities cases, and it is widely utilized in the relevant academic literature. Defendants argue that my methods are inconsistent and subjective, but their purported examples are selective and incomplete.

b. The event study in the Nye Report does consistently evaluate the market's *ex ante* expectations on a broad array of Company-specific topics by carefully analyzing the arguments presented in over eight-thousand pages of news articles and over one

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> For information to affect stock prices in an efficient market, this information must be made available to market participants. In the present matter, I found that financial analysts, the public press, and industry and market analysts developed independent analyses of Oracle's strategic positioning and its expected performance within the industry. For example, during the Class Period, 31 separate financial analysts from different brokerage houses covered Oracle. Oracle was mentioned in at least 3,021 articles covered by the Dow Jones News Wires, Bloomberg, and Reuters during the Class Period, a rate of almost 60 articles per trading day during the Class Period. Oracle's products were also reviewed on multiple occasions by both industry and market analysts including AMR Research, BlueStone Capital, Forrester, Gartner Research, and Morgan Stanley. **The degree to which financial analysts, the public press, industry analysts, and market experts scrutinized Oracle suggests that any new information would have been quickly incorporated into the stock price**.

(*See* the Expert Report of Christopher M. James, dated May 25, 2007, *In Re Oracle Corporation Securities Litigation*, C001-0988-MJJ. Emphasis added.)

[10] James Deposition, p. 15.

hundred analyst reports published on the 38 event dates under study. Defendants' criticisms myopically focus on earnings information, without considering that Barclays routinely announced multiple pieces of complex, value-relevant information.

c. Defendants falsely assert that I provide no description or methodology for how I chose which analyst reports and news articles to discuss in the Nye Report and that I did not consider the totality of relevant information on the event days. To the contrary, I reviewed virtually all of the available news and analyst commentary on the event days, aggregated the analyst reactions, and weighed whether the analysts believed the news had a positive, negative, or neutral effect on Barclays' stock price. I then determined whether the observed stock price reaction (net of market and industry effects) on these dates was consistent with that expected in an efficient market. Notably, Dr. James has not identified *any* news articles not considered in the Nye Report, and neither of two incremental analyst reports he identifies, which are not cited in the Nye Report (both issued on the same day), convey information that contrasts with the findings of my event study.

d. Dr. James states that my "finding of efficiency is sensitive to [my] choice of regression model."[11] However, Dr. James fails to mention that the effect of including Standard Chartered in the industry index is minimal and does not apply to Barclays' ADSs, which are the primary subjects of my market efficiency analysis, as well as the securities at issue in this litigation.

e. My examination of the corrective disclosure date is supportive of market efficiency. Dr. James does not dispute the fact that new material information regarding Barclays was released on June 25–26, 2014, or that the price decline in Barclays' stock on June 26, 2014 is consistent with market efficiency.[12]

f. The fact that none of the 21 "Events and Presentations" dates were associated with statistically significant Company-specific returns is supportive of my finding that the market for Barclays' stock was efficient throughout the Class Period. Efficient stock prices should not react significantly to stale and/or immaterial information that does not alter investors' expectations of future cash flows and/or the systematic risk of the firm.

g. Defendants fail to provide any evidence contradicting my opinion that damages in this matter can be calculated using a common "out-of-pocket" methodology that can be employed mechanically on a class-wide basis. As described in the Nye Report, a damages methodology that can be commonly applied to the Class involves measuring the abnormal return in response to the alleged corrective disclosure, in this case June 26, 2014, adjusting for any confounding news, and then applying the constant dollar method to calculate the amount of inflation throughout the Class Period. Given that Plaintiffs' theory of the case is that the false statements and omissions regarding

[11] James Report, Section V.B.1.c).

[12] James Deposition, pp. 166–168.

Barclays' operation of LX artificially maintained the stock price, and that this inflation was removed from the ADS price following the corrective disclosure on June 25, 2014 as reflected in the price change on June 26, 2014, it is clear that their theory of liability matches their theory of damages.

h. Defendants have not put forth an analysis of price impact and their assertions that my event study and testimony demonstrates a lack of price impact are baseless. The event study presented in the Nye Report was designed to examine market efficiency during the Class Period, not loss causation. Nevertheless, the absence of a statistically significant price increase on alleged misrepresentation dates by no means negates the presence of price inflation in a security. Furthermore, it is my understanding that Defendants' contentions about what did or did not cause the June 26, 2014 price decline in Barclays' stock, and whether such declines are recoverable under Plaintiffs' theory of liability, are arguments relevant to loss causation, not price impact.

V. My Examination of *Cammer* Factor 5 Is Objective and Reliable

8. Contrary to Defendants' assertions, my event study is objective and consistent with the methodologies used in the academic literature.[13] It is also the same methodology that has been widely accepted in securities litigation. While Defendants suggest that there is a specific accepted methodology for how to review news, the performance of an event study is not a cookie-cutter process by which an expert blindly follows a certain procedure. I implemented a comprehensive methodology whereby I reviewed news, analyst reports, and changes in Barclays' stock price throughout the Class Period. Indeed, while Defendants argue about the way in which I performed my event study, Dr. James performed no event study at all.

9. Recently, my event study methodology was received favorably by the court in the *Heckmann Corporation Securities Litigation*, which was granted class certification on June 6,

[13] *See, e.g.*, Fama, Eugene F., 1991, "Efficient Capital Markets: II," *The Journal of Finance*, Vol. 46, Issue 5, pp. 1575–1617; and Mitchell, Mark L. and Jeffry M. Netter, 1994, "The Role of Financial Economics in Securities Fraud Cases: Applications at the Securities and Exchange Commission," *The Business Lawyer*, Vol. 49, pp. 545–590.

2013. Specifically, Magistrate Judge Mary Pat Thynge denied defendants' motion to exclude my declaration, determined that the market was efficient based on my analysis, and commented:

> Dr. Nye executed an event study, which is a generally accepted practice in determining market efficiency in securities litigation. He also constructed a regression analysis, a proper control period, and selected relevant dates to demonstrate the requisite cause and effect. While defendants suggest other dates to include in his event study, none are necessary for the study to be admissible. Dr. Nye's study included earnings-related announcements, which, in his opinion, would impact the market, and thus demonstrate market efficiency. Defendants [*sic*] argument that these dates were not objective go to weight. Their critique attacks Dr. Nye's conclusions, rather than his application of the accepted methodology.[14]

10. Even more recently, my event study methodology was adopted by Dr. Kenneth M. Lehn, the Samuel A. McCullough Professor of Finance in the Joseph M. Katz School of Business at the University of Pittsburgh, who was retained by Defendants in *Richard Thorpe et al. v. Walter Investment Management, Corp. et al.* to review and respond to my report and deposition testimony in that matter. Specifically, Dr. Lehn comments that:

> [a]fter reviewing Dr. Nye's report and analyses, I do not disagree with Dr. Nye's opinion that the market for Walter's stock was efficient during the Class Period …. In addition, I have performed my own independent event study analysis and find that the results are qualitatively similar to Dr. Nye's results. Hence, in this report, I report the results based on Dr. Nye's event study results.[15]

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[14] Report and Recommendations of Magistrate Judge Mary Pat Thynge, *In Re Heckmann Corporation Securities Litigation*, Case 1:10-cv-00378-LPS-MPT, Document 236, filed June 6, 2013, pp. 17, 18. In two other cases, which were granted class certification, my event studies were based on the same methodology used in the Nye Report, and were not challenged by defendants. (*See* the Declaration of Zachary Nye, Ph.D., *David Shapiro, et al. v. Matrixx Initiatives, Inc., et al.*, submitted February 20, 2012; and the Declaration of Zachary Nye, Ph.D., *In Re IndyMac Bancorp, Inc. Securities Litigation*, submitted August 29, 2011).

[15] Expert Report of Kenneth M. Lehn, dated September 30, 2015, *Richard Thorpe et al. v. Walter Investment Management, Corp. et al.*, United States District Court, Southern District of Florida, Case No.: 14-cv-20880-UU, at footnote 23.

11. As described in the Nye Report, I analyzed the cause-and-effect relationship between unexpected corporate events or financial releases and an immediate reaction in market prices by conducting an event study commonly employed in both the academic literature and securities litigation.[16] Relying on a large body of event study literature that finds that changes in corporate earnings affect stock prices, I identified a set of dates (events) on which Barclays released quarterly or year-end financial results and/or earnings guidance.[17] I also examined dates identified on Barclays' website as "Events and Presentations," and June 25–26, 2014, which is the end of the Class Period and the date of the alleged corrective disclosure in this matter.[18] In total, I evaluated 38 event dates and tested whether the price of Barclays' stock (ADSs and London shares) reacted in a manner consistent with how the information was received by investors.[19]

12. For each of the event dates studied, I determined whether any unexpected, value-relevant information was contained in the disclosures and if any contemporaneous confounding information was disclosed. I reviewed virtually all of the available news and analyst commentary concerning the events, aggregated the analyst reactions, and weighed whether the

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[16] Nye Report, ¶¶58, 59.

[17] *See, e.g.*, Ball, R., and P. Brown, 1968, "An Empirical Evaluation of Accounting Income Numbers," *Journal of Accounting Research*, pp. 159–178; Foster, G., "Quarterly Accounting Data: Time-Series Properties and Predictive-Ability Results," *Accounting Review*, Vol. 52, pp. 1–20; Brown, S. L., 1978, "Earnings Changes, Stock Prices, and Market Efficiency," *Journal of Finance*, Vol. 33, pp. 17–28; Watts, R., 1978, "Systematic 'Abnormal' Returns after Quarterly Earnings Announcements," *Journal of Financial Economics*, Vol. 6, pp. 127–150; and Rendleman, R. J., C. P. Jones, and H. A. Latane, 1982, "Empirical Anomalies Based on Unexpected Earnings and Importance of Risk Adjustment," *Journal of Financial Economics*, Vol. 10, pp. 269–287.

[18] Nye Report, ¶59.

[19] Nye Report, ¶60.

analysts believed the news had a positive, negative, or neutral effect on Barclays' stock price. I then determined whether the observed Barclays stock price reaction (net of market and industry effects) on these dates was consistent with that expected in an efficient market. As described in the remarks for each date included in my event study, I found that the change in Barclays' stock price was consistent (directionally and in magnitude) with the contemporaneous disclosures made.[20] On 11 of the 38 dates examined, Barclays' ADSs exhibited a statistically significant Company-specific return in reaction to the disclosure of unexpected, value-relevant information. For six of the event dates that are not associated with statistically significant Company-specific returns (five earnings releases and one Annual General Meeting), the Company's announcements were generally in line with market expectations, and/or the results were largely mixed, such that the insignificant return observed on each date is consistent with that expected in an efficient market. Furthermore, my sample of event dates includes both news and no-news days. Specifically, on the 21 days with "Events and Presentations" identified on Barclays' website, the Company made public disclosures that contained no unexpected, value-relevant information.[21] Consistent with market efficiency, the Company-specific returns on these dates were statistically insignificant.

13. Contrary to Defendants' assertions, there is no improper subjectivity in how I weighed the analysts' reactions to event-day news. The effect of the news released by Barclays is highlighted in the commentary provided by analysts and reflected in price targets and earnings

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[20] Nye Report, Exhibit 11.

[21] Nye Report, ¶66.

estimates set by analysts.[22] Thus, by incorporating analysts' reactions to the various disclosures, I properly assessed whether the price of Barclays' stock moved in a manner consistent with that expected in an efficient market. Given the academically accepted fact that "target prices and analyst justifications are important in explaining the market's reaction," it is clear that my analysis is economically grounded and reliable.[23]

14. Lastly, it is worth noting that in *Local 703 v. Regions Fin. Corp.*, Dr. James rendered opinions on market efficiency and price impact using an event study methodology that appears similar in many respects to the methodology employed in the Nye Report.[24] Specifically, in *Local 703 v. Regions Fin. Corp.*, Dr. James based his conclusions on an event study, which includes a calculation of daily company-specific returns that control for market and industry effects, an indicator of statistical significance, and his "review of public press and analyst reports" on the event dates of interest.[25]

15. As described throughout this section, my event study, which is the product of reliable principles and methods applied to the facts of the case, provides strong evidence that Barclays' ADSs and London shares traded in an efficient market during the Class Period.

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[22] Asquith, Paul, Michael B. Mikhail and Andrea S. Au, 2005, "Information content of equity analyst reports," *Journal of Financial Economics*, Vol. 75, pp. 245–282 at pp. 247, 280, 281 ("[f]or [analyst] reports that occur with other information releases, the market reacts to the analyst price targets and to the justifications provided." Accordingly, "the analyst's role is to provide an interpretation of information releases to the market," and "target prices and analyst justifications are important in explaining the market's reaction"). Cited in James Report, footnote 54. *See also*, Nye Deposition, pp. 82, 131.

[23] *Id.*

[24] Declaration of Christopher M. James, Ph.D., dated March 21, 2012, in *Local 703 v. Regions Fin. Corp.*, Case 2:10-cv-02847.

[25] *Id.*

a. My Event Study Consistently Evaluates Whether Information Was Unexpected or Value-Relevant by Analyzing the *Ex Ante* Expectations of Actual Investors.

16. With respect to my event-study methodology, Dr. James complains generally that I do "not consistently evaluate the market's *ex ante* expectation of a particular event on each day and hence cannot reliably identify what information was unexpected and value-relevant."[26] To the contrary, my event study does consistently evaluate the market's *ex ante* expectations on a broad array of Company-specific topics by carefully analyzing the arguments presented in over eight-thousand pages of news articles and over one hundred analyst reports published on the 38 event dates under study.[27, 28] As described at my deposition, I evaluated *ex ante* expectations by considering not just earnings surprises, but also the more qualitative information often conveyed in corporate disclosures:

> [F]or some of the announcements…they dealt with the metric that had clear published prior expectations by equity analysts …in this case, profit before tax, PBT, is a popular metric that was focused on by analysts. And they published their forecasts…in advance of these disclosures. And so for those metrics that they publish, you can see whether the…actual result… was higher or lower than what the prior expectation was. Those expectations vary sometimes significantly across the various investment houses for analysts. And so what people tend to look at is, quote, what -- the consensus, just the average across the set of forecasts that are available. And a lot of academic literature will look at, [relative] to the consensus forecast: How did the actual result come in? Was it higher? Did it beat expectations? Was it lower? Did it miss expectation? Or…was it…about the same as expectations? And… if you beat expectations significantly, you will see -- and this is known in the academic literature -- a stock price increase. If you miss it significantly, you will see a stock price decrease. But if you are close to it -- you are approximately in line, as they say – you tend not to see a stock price reaction.
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> There's a whole other side of this. …[C]ommentary by the analyst often goes into -- and the disclosures by the company are -- involve metrics and… more

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[26] James Report, ¶23.

[27] I have produced 8,201 pages of news articles that were published on or shortly after each event date.

[28] *See* Section V.b. for a tabulation of the analyst reports I considered.

> qualitative subject matter, [for which] there is no published prior expectations. And the way I and other analysts glean what the prior expectations for those more, say, qualitative aspects of the disclosure… is by examining the content of the reports or these news articles. You can see clear discussions of: "Hey, …their ability to meet their leverage requirements under Basel three…surprised us." …[T]hey came in much better than they expected. That is not something there is… an ex ante forecast for. So my point is it really [is from] the meat of the analyst reports or the news that you can glean the expectations and how the results deviated from the expectations across the relevant subject matter.[29]

17. Further, Dr. James fails to acknowledge that my "methodology of reading analyst reports and opining on whether the contents of the reports were in line with an abnormal stock price reaction,"[30] is entirely consistent with Asquith, Mikhail and Au (2005), a highly cited academic article published in the *Journal of Financial Economics*.[31] Specifically, Asquith, Mikhail and Au (2005) "extend [previous] research by incorporating the contents of analyst reports in their entirety rather than just the individual summary elements such as the stock recommendation [and earnings forecast],"[32] finding that "[f]or [analyst] reports that occur with other information releases, the market reacts to the analyst price targets and to the justifications provided."[33] Indeed, the paper concludes that "the analyst's role is to provide an interpretation of information releases to the market," and that "target prices and analyst justifications are important in explaining the market's reaction."[34]

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[29] Nye Deposition, pp. 116–119.

[30] Nye Deposition, pp. 130, 131.

[31] Asquith, Paul, Michael B. Mikhail and Andrea S. Au, 2005, "Information content of equity analyst reports," *Journal of Financial Economics*, Vol. 75, pp. 245–282. According to Google Scholar, Asquith, Mikhail and Au (2005) has been cited by 546 papers, as of October 19, 2015.

[32] *Id.*, at p. 246.

[33] *Id.*, at p. 280.

[34] *Id.*, at pp. 247, 281.

18. Dr. James attempts to downplay the similarity between my methodology and that of Asquith, Mikhail and Au (2005) by claiming that my methodology "does not provide an objective definition of what types of information [I consider] value-relevant, and does not consistently discuss all instances of particular types of information across event days," whereas Asquith, Mikhail and Au (2005) "construct[s] consistent, well-defined measures of the types of information to test—the percentage change in earnings forecasts, analyst rating changes, the percentage change in price targets, and an objective measure of analyst sentiment—and examine the same set of measures, calculated in the same fashion, on every day of interest."[35] What Dr. James fails to mention is that the paper measures analyst sentiment "by aggregating the number of positive remarks less the number of negative remarks related to 14 specific criteria: revenue growth, earnings growth, new product introductions, new projects, cost efficiencies, expectations met, mergers and acquisitions, repurchase programs, industry climate, management, international operations, leverage, competition, and risk."[36] The authors states that "[w]hile not perfect, we believe our method is unbiased and reasonably objective."[37] Given the breadth of topics covered by these 14 criteria, as well as the inherent subjectivity of deciding what constitutes a positive versus a negative versus a neutral remark, it is clear that considerable discretion over a broad swath of potentially value-relevant information is allowed by the methodology advocated by Asquith, Mikhail and Au (2005). Similarly, my methodology consistently determines what types of information are value-relevant on a given event date, by reading the commentary and justifications of the actual analysts and new commentators covering Barclays at the time. Given

[35] James Report, ¶33.

[36] *Supra* note 31, at p. 254.

[37] *Id.*, at p. 259.

the considerable variation in Company-specific information disclosed on each event date, my evaluation of the particular types of information considered new and value-relevant to analysts and other market commentators necessarily varies across my sample of event dates.

19. Moreover, my event study, which "ascribe[s] price changes to the arrival of specific new information," is consistent with the methodology suggested by Huberman and Regev (2001), an academic article Dr. James cites to support his opinion that "market efficiency cannot be assumed without an empirical investigation":

> Although the efficient-markets hypothesis predicts that price changes are unpredictable, it associates them with changes in traders' beliefs about future cash flows or the appropriate discount rate. Beliefs change with the arrival of new information. Thus, in hindsight at least, we should be able to ascribe price changes to the arrival of specific new information.[38]

20. With respect to Dr. James criticism that my event study merely asserts that a company-specific return is consistent with information, it is standard practice for researchers to reach conclusions based on their empirical results. MacKinlay (1997), which Dr. James cites numerous times,[39] states:

> Ideally the empirical results will lead to insights relating to understanding the sources and causes of the effects (or lack of effects) of the event under study. Additional analysis may be included to distinguish between competing explanations. Concluding comments complete the study.[40]

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[38] Huberman, G. and T. Regev (2001), "Contagious Speculation and a Cure for Cancer: A Nonevent That Made Stock Prices Soar," *The Journal of Finance*, 56(1), pp. 387–396, at p. 387. Cited in the James Report, footnote 18; at his deposition, Dr. James stated that he agreed with the "basic tenant" of what the authors are proposing in this quote (*see* pp. 116, 117).

[39] James Report, ¶¶25, 26.

[40] MacKinlay, A. Craig, 1997, "Event Studies in Economics and Finance," *Journal of Economic Literature*, Vol. 35, pp. 13–39 at pp. 15–16.

21. Campell, Lo and MacKinlay (1997), which is a textbook referred to in ¶25 of the James Report, provides a section titled "4.1 Outline of an Event Study," which states "[w]hile there is no unique structure, [an event study] can be viewed as having seven steps," which include "Interpretation and conclusions" as the seventh and final step.[41]

22. In addition, Dr. James complains that because "Dr. Nye fails to provide a definition of what qualifies as an earnings surprise, it is unclear why he finds earnings in line with expectations on some of the days he considers and not others."[42] What is clear, however, is that Dr. James is solely concerned with my evaluation of earnings surprises on five of the 38 days I examined in my event study: August 2, 2011; February 10, 2012; April 26, 2012; February 12, 2013; and April 24, 2013.[43] Further, while Dr. James correctly states that "earnings releases are widely studied in the academic literature, and academic studies stress the importance of using an objective definition of earnings expectations to measure whether earnings releases were in line with market expectations or a surprise relative to prior expectations,"[44] his specific criticisms myopically focus on earnings information, without considering that Barclays announced multiple pieces of complex, value-relevant information on all five of these dates.

23. With respect to February 10, 2012, on which Barclays' stock exhibited a statistically significant price increase, Dr. James complains that though I did "cite[] earnings expectations for … two analysts this day, I failed: 1) "to cite a third earnings estimate, by JP Morgan, that notes

[41] Campbell, John Y., Andrew W. Lo, and A. Craig MacKinlay, *The Econometrics of Financial Markets*, Princeton University Press, 1997, pp. 150–152.

[42] James Report, ¶26.

[43] James Report, ¶¶25–29.

[44] James Report, ¶25.

that clean operating profit before tax was £585mn compared to its own estimate of £977mn, a shortfall of 40 percent"; [45] and 2) to report that Deutsche Bank commented "that the results were … 4 percent below consensus estimates."[46] These are simply unfounded criticisms by Dr. James. Not only do I quote negative commentary contained in these JP Morgan and Deutsche Bank reports,[47] but Dr. James fails to mention that the fact that *The New York Times*, *Associated Press Newswires* and *The Wall Street Journal* published news articles, which quoted various analysts that "attributed the gain in Barclays' stock price amid an industry-wide decline that day to optimistic statements by the Company and the 'quality of earnings.'"[48] As for my conclusion that earnings were generally in line with market expectations, neither Deutsche Bank nor any of the analysts commented that Barclays' financial results were significantly worse than expectations and UBS explicitly stated that the results were "broadly in-line."[49]

24. With respect to February 12, 2013 and April 24, 2013, Dr. James states that I "[do] not have a methodology for translating individual analyst forecasts into a measure of a 'surprise,' and [am] inconsistent in [my] interpretation of analyst forecasts across days."[50] Specifically, Dr. James claims that "despite similar results relative to consensus, and a similar balance of individual analyst expectations, [I categorize April 24, 2013] as a 'slight miss versus market

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[45] James Report, footnote 37.

[46] James Report, ¶29.

[47] Nye Report, Exhibit 11, p. 8: "JP Morgan stated that results 'showed weaker than expected trends within the key divisions of BarCap and UK Retail. Although the weakness in capital markets revenues is unsurprising given market conditions in Q4, the lower RWAs as a result of weak activity levels provided some offset'"; "Deutsche Bank stated that Barclays Group 2011 PBT was 2% below its estimate after certain adjustments."

[48] *Id.*, at pp. 8, 9.

[49] *Id.*

[50] James Report, footnote 40.

expectations', while [I] viewed February 12, 2013 as 'in-line.'" However, Dr. James criticism is merely semantic, as I do not believe there is an economically significant difference between earnings results that are characterized as "a slight miss" versus "generally in line." More importantly, Dr. James fails to mention that market commentators also expressed concern over other economically significant information disclosed on these dates that caused Barclays' stock price to exhibit a statistically significant price change. As described in the Nye Report, "there was an overwhelmingly positive response by analysts to the Company's strategic review" on February 12, 2013, [51] and a noted "decline in the wider market for European banks" on April 24, 2013.[52]

25. With respect to April 26, 2012, Dr. James apparently disagrees with my conclusion that "the news on this day [w]as 'mixed but generally in line with expectations' despite … four reports [by Morgan Stanley, Deutsche Bank, Citigroup and UBS] explicitly stating that earnings exceeded consensus estimates."[53] Once again, Dr. James fails to tell the whole story. As is clearly laid out in the Nye Report: 1) "UBS concluded that the Company's results were 'noisy' 'but broadly in-line'"; 2) "Morgan Stanley attributed the PBT beat to consensus to lower [one-time] impairment charges"; 3) "Deutsche Bank noted that the first quarter results were better than consensus, driven by lower than forecasted loan losses, and better than forecasted revenues (largely at Barclays Capital)"; and 4) "Citigroup said the results were 'mixed' with adjusted Group PBT 'ahead but low quality' and that 'by division the beat is due to 'one-off' items in Head Office Functions (hedge gain on employee share awards) and UK Corporate (FV gain).'"[54]

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[51] Nye Report, Exhibit 11, pp. 18–20.

[52] Nye Report, Exhibit 11, pp. 20–22.

[53] James Report, ¶26.

[54] Nye Report, Exhibit 11, pp. 10, 11.

Given the full context of these reports, it is clear that none of these analysts is overly enthusiastic about Barclays' first quarter 2012 results, which is consistent with the statistically insignificant Company-specific return observed on April 26, 2012.

26. Dr. James also criticizes my treatment of August 2, 2011 and April 23, 2013, stating that "[I do] not explain why [I interpret] a positive surprise of 5 percent [on August 2, 2011] relative to prior consensus estimates as 'in line' with expectations while [I interpret] a 2 percent negative surprise [on April 24, 2013] relative to prior consensus estimates as a 'slight miss.'"[55] Dr. James then notes that my conclusions on these two dates are inconsistent, given that Barclays' stock exhibited a statistically insignificant return on August 2, 2011 in response to a +5% earnings surprise, but exhibited a statistically significant negative return on April 24, 2013 in reaction to a smaller earnings surprise of -2%.[56] As should come as no surprise at this point, Dr. James once again fails to consider the totality of information disclosed on these two event dates. Indeed, as described in the Nye Report, not only were the Company's second quarter 2011 financial results released on August 2, 2011 generally in line with analysts' prior expectations,[57] but analyst commentary was generally mixed with certain analysts taking a more upbeat tone than others.[58]

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[55] James Report, ¶27.

[56] James Report, ¶28.

[57] *E.g.*, UBS stated that "Barclays delivered H1 results largely in-line with expectations"; Deutsche Bank stated that results "were in line with expectations"; and Citigroup stated that it expected "2011 'underlying' PBT consensus estimate of GBP7.1bn, to be broadly unchanged following [the results]." (*See* Nye Report, Exhibit 11, pp. 3–4.)

[58] *E.g.*, Canaccord commented that adjusted PBT was 5% better than consensus; Morgan Stanley issued a generally positive report, leaving EPS estimates for 2012 and 2013 "the same … with only cosmetic changes," stating that it expected "a slowing of negative consensus EPS revisions"; and RBS stated that it was "unconvinced" the Company was on track to meet its projections. (*See* Nye Report, Exhibit 11, p. 3.)

Thus, considering the totality of information, the statistically insignificant return observed on August 2, 2011 is consistent with that expected in an efficient market, and as mentioned above, the statistically significant price decline on April 24, 2013 can be explained by the noted "decline in the wider market for European banks" that day.[59]

27. Lastly, it is worth noting that Dr. James has not put forth any specific criticism of my evaluation of *ex ante* expectations on 33 of the 38 event dates examined in the Nye Report.

b. The Nye Report Considers the Total Mix of Information on Event Dates and Dr. James' Purported Examples to the Contrary are Selective and Incomplete.

28. In the Nye Report, as part of my event study analysis, I reviewed virtually all of the available news and analyst commentary on the event dates, aggregated the analyst reactions, and weighed whether the analysts believed the news had a positive, negative, or neutral effect on Barclays' stock price. However, Defendants' falsely assert that I provide no description or methodology for how I chose which analyst reports and news articles to discuss in the Nye Report and that I did not consider the totality of relevant information on the event days.[60]

29. In an effort to support this claim, Dr. James misleadingly compares the *total* number of analyst reports and news articles issued during the entire Class Period, a 2.9-year or 1058-day period, to the number of analyst reports and news articles discussed in Exhibit 11 to the Nye

[59] Nye Report, Exhibit 11, pp. 20–22.

[60] James Report, ¶¶31–38. *See also*, Defendants' Opposition to Class Certification, pp. 19, 20.

Report.[61] However, Exhibit 11 is a summary of news and analysts reports for the 38 event days I considered—thus his comparison to the entire Class Period is not relevant.[62]

30. Furthermore, while Exhibit 11 is not intended to be a catalog of all available analyst reports, it is clear that I considered virtually all of the analyst reports available to me through Thomson Reuters published by the foremost brokerage firms on each of the event days.[63] These reports were provided to Dr. James as part of my document production:

Source	Number of Reports Issued on an Event Day	Number of Reports Considered in Nye Report & Produced	Number of Reports Cited in Nye Report[64]
Deutsche Bank	25	25	25
UBS	16	16	15
JP Morgan	15	15	14
Canaccord	10	10	9
RBC Capital Markets	10	10	9
Numis	7	7	7
Jefferies	4	4	4
Morgan Stanley	4	4	4
RBS	4	4	4
Evolution	1	1	1
Daniel Stewart	3	1	1
Total	99	97	93

[61] Dr. James also notes the number of analyst reports issued within a week of each event date. (James Report, footnote 52.) However, this figure is misleading as well, given that he provides no basis for using a 7-day window, and his figures include reports from sources such as Thomson Reuters Street Events, which are conference call and presentation transcripts, and Zack's Investment Research, which are merely periodic Company Snapshot reports, containing company financial data but no analyst commentary.

[62] James Report, ¶32.

[63] *See, e.g.*, Thomson Reuters Extel survey of Leading Pan-European Brokerage Firms for Equity Sectors Research. The surveys for 2013 and 2014 lists Morgan Stanley, UBS, JP Morgan, Deutsche Bank, Jefferies, and RBC Capital Markets among the top 25 brokerage firms. (https://www.extelsurveys.com//ExtelSurveysHome.aspx)

[64] As Dr. James notes, Exhibit 11 cites 117 unique analyst reports (James Report, ¶32). This figure includes reports issued on dates surrounding the actual event date.

31. In addition to considering over 50,000 headlines of news articles pertaining to Barclays during the Class Period,[65] I produced over 8000 pages of news articles to Defendants that were considered in the Nye Report. Notably, Dr. James has not identified *any* news articles not considered in the Nye Report for purposes of evaluation market efficiency, and he has identified only two analyst reports not explicitly cited in the Nye Report (both issued on the same day). As discussed below (¶¶37–38), when considered in full, these two reports are clearly consistent with my findings.

32. Moreover, it is misleading for Dr. James to suggest, as he does, that there is a threshold with respect to the number of analyst reports and/or news articles that should be included in the discussion of *Cammer* Factor 5. A regurgitation of all of the analyst reports and/or news articles on each day of the Class Period, or on each event day, is not required, nor would it be useful to the trier of fact. The analyst reports and news articles cited and/or produced were considered in their entirety, and the Nye Report presents my conclusions regarding market efficiency for each event date.

33. For three of the 38 event dates, February 10, 2012, August 2, 2011, and October 31, 2011, Dr. James asserts that I "fail[] to discuss certain types of information, despite considering similar information relevant on other days,"[66] Dr. James is misconstruing the facts, and his purported examples are selective and incomplete. The analyst reports he cites, when considered in full and within the totality of the information, do not undermine my conclusion with respect to

[65] Exhibit 13 to my original report (discussed at James Report ¶32).

[66] James Report, ¶¶34–37.

whether Barclays' stock price reaction was consistent with market efficiency. Each of these dates cited by Dr. James is discussed below.

34. Regarding February 10, 2012,[67] despite the fact that the Nye Report discusses four analyst reports (UBS, Deutsche Bank, Morgan Stanley, and JP Morgan), as well as media reports quoting other analysts, Dr. James states that I "fail to discuss a Citigroup report [synopsis] that expresses a negative view on earnings … that noted that Barclays' reported PBT [profit before tax] in the fourth quarter of 2011 was 31 percent below consensus estimates."[68] First, however, the Citigroup synopsis, while not specifically cited in the Nye Report, was included in the materials I considered and produced to Defendants. Second, analyst reports that were explicitly cited in the Nye Report discussed the fact that Barclays' fourth quarter 2011 earnings were below analyst/consensus estimates. For example, as Dr. James knows, JP Morgan stated that Barclays reported a "clean" fourth quarter 2011 operating profit 40% (38%) below JP Morgan's (consensus) estimate.[69] Deutsche Bank noted that fourth quarter 2011 stated PBT was 19%

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[67] On February 10, 2012, Barclays released full-year 2011 financial results and there was a statistically significant positive company-specific residual return that day. (Nye Report, Exhibit 11, pp. 7, 8.)

[68] James Report, ¶35, citing Citigroup, "Alert: Barclays PLC (BARC.L)—4Q11 Results—Initial Reaction" (Synopsis), February 10, 2012. The entire synopsis is a follows:

> Underlying Group PBT Miss - Barclays has reported 4Q11 underlying PBT of GBP0.6bn (ex -GBP0.3bn FVOD loss, GBPl.1bn LME gain & -GBP0.6bn Spain g/will charge), 31% below consensus GBP0.8bn, and -33% qoq after also adjusting for the incremental GBP0.3bn cost due to the bank levy. 4Q11 pre-provision profit of GBP1.8bn (ex FVOD, LME, levy & g/will charge) is -21% qoq. At a divisional level the miss is mainly attributable to BarCap and UK RBB.

See also, Defendants' Opposition to Class Certification, p. 20.

[69] JP Morgan, "Barclays: Q411 results - First Thoughts - ALERT," February 10, 2012, cited in Nye Report, Exhibit 11, p. 9, discussed at James Report, footnote 37.

below its estimate, and adjusted PBT was 25% below its estimate.[70] Third, given the fact that Barclays' profit forecast for the fourth quarter 2011 was small compared to total profit for the year, 2011 results were only a slight miss to consensus. Indeed, Deutsche Bank stated that unadjusted PBT for full-year 2011 was only 4% below consensus and 3% below its estimate, and adjusted 2011 PBT was 2% below its estimate:

> Barclays FY11 stated PBT of £5,879m, 3%/4% below DBe/cons. Adjusting for BlackRock impairment (£1.8bn), debt buyback gains (£1.13bn), Spanish goodwill w/o (£597m), PPI (£1bn), own debt (£2,708m), acq and disposal losses (£152m), adj PBT of £5,590m is 2% below DBe. 4Q11 stated / adj PBT was £813m / £528m, 19% / 25% below DBe - big %'s but small £'m differences, given small profit forecast.[71]

Furthermore, Deutsche Bank maintained its Buy rating for the stock, and other analysts left their 2012–2013 EPS estimates for the Company "essentially unchanged,"[72] concluding that results were "broadly in-line" after certain adjustments.[73] Consistent with these facts, Nye Report, Exhibit 11 states that "Analyst reaction to the Company's earnings was mixed. Barclays' overall Group earnings results were generally in line to slightly below analysts' expectations." In consideration of this, as well as the fact that "[m]edia reports quoting analysts, attributed the gain in Barclays' stock price amid an industry-wide decline that day to optimistic statements by the Company and the 'quality of earnings,'" and "given the positive commentary by analysts

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[70] Deutsche Bank, "Barclays, FY11 results - The first read," February 10, 2012, cited in Nye Report, Exhibit 11, p. 9.

[71] Deutsche Bank, "Barclays, FY11 results - The first read," February 10, 2012.

[72] *See* Nye Report, Exhibit 11, citing Morgan Stanley, "Barclays Bank: 4Q11 results: better 2012 i-bank revenue outlook," February 10, 2012, and

[73] *See* Nye Report, Exhibit 11, citing UBS Equities, "First Read: Barclays," February 10, 2012.

regarding the Company's financial performance and outlook,"[74] it is clear that my examination of February 10, 2012 does not selectively omit information that would alter my conclusion that the statistically significant positive Company-specific return on February 10, 2012 is consistent with that expected in an efficient stock market.

35. With respect to August 2, 2011,[75] James complains that I fail to discuss that on August 3, 2011, "JP Morgan actually revised Barclays' earnings estimates upwards."[76] However, while not intended to be a regurgitation of all analyst commentary, my discussion of the August 2, 2011 disclosure is clearly objective and comprehensive. The Nye Report discusses virtually all of the analyst reports published on August 2, 2011 available from Thomson Reuters, including reports issued UBS, Deutsche Bank, Morgan Stanley, RBS, Canaccord and Citi.[77] I report negative commentary by analysts,[78] as well as positive commentary,[79] including that "adjusted PBT was

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[74] Nye Report, Exhibit 11, p. 10.

[75] On August 2, 2011, the Company released second quarter 2011 earnings results and there is a non-significant company-specific return that day. (Nye Report, Exhibit 11, pp. 3, 4)

[76] James Report, ¶36.

[77] Nye Report, Exhibit 11, pp. 3, 4. The only report available from Thomson Reuters published on August 2, 2011 not cited in Exhibit 11 is Seymour Pierce, "Morning Meeting Flash."

[78] *See, e.g.*, Nye Exhibit 11 (pp. 3, 4): stating that "group revenues were 1% below consensus;" quoting UBS "Barclays delivered H1 results largely in-line with expectations but with lower than anticipated revenues …"; and stating that "despite Barclays' reassurances, [RBS] was 'unconvinced' the Company was on track to meet its projections."

[79] *See, e.g.*, Nye Exhibit 11 (pp. 3, 4): stating that "Morgan Stanley issued a generally positive report, leaving EPS estimates for 2012 and 2013 "the same … with only cosmetic changes," stating that it expected "a slowing of negative consensus EPS revisions;" that "Group loan loss charges of £1.8 billion were better than expectations of £2.1 billion;" and quoting UBS "lower than anticipated revenues offset by good cost discipline and a better out-turn on impairment. Modest growth in TNAV [tangible net asset value] (ahead of EPS accretion) is supportive to the share price, which trades at a significant discount to book value."

5% better than consensus."[80] I also report that several analysts concluded results were largely in-line with expectations.[81] Notably, Exhibit 11 to the Nye Report also discusses the August 3, 2011 JP Morgan report cited by Dr. James:[82]

> JPMorgan stated that first half results were "i) £0.1bn ahead of JPMe on revenues, ii) £0.3bn better than JPMe on loan loss provisioning iii) £0.5bn worse on costs (in Barcap, Western Europe and Africa) with clean PBT ex JV at £3,210mn only 1% below JPMe £3,247mn."[83]

36. Indeed, the fact that JP Morgan increased its 2011–2013 EPS estimates for Barclays by "5% average" does not undermine my conclusion that the statistically insignificant stock price reaction in August 2, 2011 is consistent with market efficiency. In fact, as noted above, Barclays' operating profits for the first half of 2011 were 1% below JP Morgan's estimates. Thus, my conclusion that "analyst reactions to the Company's quarterly financial results were mixed," and that "generally, results were in-line with analysts' expectations" is supported by the record, and consistent with the statistically insignificant company-specific stock price return on August 2, 2011, and Dr. James fails to provide evidence to the contrary.

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[80] Nye Exhibit 11, p. 3.

[81] *E.g.*, Nye Exhibit 11, citing: UBS Equities, "Barclays "H1 Results – Initial View," August 2, 2011 ("Barclays delivered H1 results largely in-line with expectations but with lower than anticipated revenues offset by good cost discipline and a better out-turn on impairment. Modest growth in TNAV [tangible net asset value] (ahead of EPS accretion) is supportive to the share price, which trades at a significant discount to book value."); Deutsche Bank Equity Research, "Barclays Alert: Barclays 1H11 results: Reassurance in the detail," August 2, 2011 (stated that results were 'in line with expectations' and that it did not 'see much likely to change minds of bulls or bears, given the environment.'); Deutsche Bank Equity Research, "Barclays; Feet to the Fire."

[82] Thomson Reuters states that the "document date" for the JP Morgan report is August 2, 2011 11:15PM (received August 10, 2011, 1:00AM), but the report is dated August 3, 2011.

[83] Nye Exhibit 11, p. 3, citing: JP Morgan, "Barclays: Solid H111 results, cheap valuation but hampered by regulatory uncertainty," August 3, 2011.

37. For October 31, 2011,[84] Dr. James states that I fail to discuss two reports issued the next day (November 1, 2011) that "contrasts with" my interpretation, referring to: (i) a UBS report in which it downgrades Barclays' stock from "Buy" to a "Neutral;" and (ii) a Morgan Stanley report in which it decreases its price target for Barclays' by approximately 4.5% (from 230p to 220p).[85] However, my discussion of the October 31, 2011 disclosure is clearly objective and comprehensive. The Nye Report discusses virtually all of the analyst reports published on October 31, 2011 available from Thomson Reuters, including reports issued by Citi, JP Morgan, Deutsche Bank, RBS, UBS, and Evolution,[86] and concluded that "most analysts reacted positively to the earnings results."[87] I also discuss the occasional negative analyst commentary that day, such as RBS who "concluded that the results were 'disappointing.'"[88] In the Nye Report, I discuss the UBS report issued on October 31, 2011, which states that results were a "significant beat on headline 'noise'."[89] This report also states that "With tough conditions expected to continue, this leaves us broadly content with our below-consensus 28p EPS forecast for 2012 which is in line with the current run-rate." The UBS report issued on November 1, 2011 cited by Dr. James is consistent with this statement. Indeed, on November 1, 2011, UBS's 2011 EPS estimate for Barclays was "modestly upgraded, (+2%), and its 2012 EPS estimate was

[84] On October 31, the Company released third quarter 2011 results, and there was a statistically significant positive company-specific return that day. (Nye Report, Exhibit 11, pp. 6, 7.)

[85] James Report, ¶37.

[86] Nye Report, Exhibit 11, pp. 6, 7. The only reports available from Thomson Reuters published on October 31, 2011 not cited in Exhibit 11 are reports by Seymour Pierce.

[87] Nye Report, Exhibit 11, p. 7.

[88] Nye Report, Exhibit 11, p. 7, citing RBS, "Barclays - Less, not more," October 31, 2011 and also RBS, "European Banks - Today's Watchlist," October 31, 2011.

[89] Nye Report, Exhibit 11, pp. 6, 7, citing UBS Equities, "First Read: Barclays, A Challenging Capital Market Backdrop," October 31, 2011.

"broadly unchanged" (from 28.53p to 28.68p). Furthermore, notwithstanding the downgrade, UBS "modestly" increased its price target for the Company and made several positive comments:

> **2011E EPS +2%** but downgrade to Neutral
> **Little change to estimates, upgrading PT,** cutting to Neutral
> **Post Q3, we have modestly upgraded our full year estimates (+2%) but subsequent years are broadly unchanged.** While we exclude the pension fund deficit and value of own credit from Barclays' reported tangible book value as our basis for valuation, **a higher start point here has led to a modestly higher price target (215p from 208p)** but the more modest upside leads us to reduce our rating to Neutral.
>
> **Headwinds drive a better group balance**
> We expect 2012 to be a similar year to 2011 for BarCap. A consequence of this is that we expect a more balanced source of earnings with BarCap c.44% of group PBT in 2012. **Moreover, we note that the trends within the Retail/Commercial business were positive in Q3 in that income increased by c.£100m in both the UK Retail Bank** and Barclaycard but impairment in both divisions was below Q2 levels.
>
> BlackRock, pension fund and own credit distort NAV
> The near £3bn gain on own credit has lifted the gross gains on own credit on the balance sheet to c.£3.8bn equivalent to near 30p per share. This is included in NAV but excluded from CT1. The BlackRock stake has been marked to the September end valuation of $148 per share versus the current price of $162 ahead of the lock-up expiry on Dec 1st. Gains will be a positive AFS and enhance book but not CT1. We also estimate that the pension fund deficit is c.£3bn or 25p/share.
>
> Valuation
> Our Barclays price target of 215p is derived from Dec-11E TBV, adjusted for the own credit gain and pension fund deficit with a haircut applied for regulatory risk.[90]

38. Likewise, the Morgan Stanley report issued on November 1, 2011 cited by Dr. James is also positive in many respects, including its opinion that third quarter results were "reassuring" and "better than expected":

> 3Q11 results - reassuring but flattered by hedging gains

[90] UBS, "Barclays, 2011E EPS +2% but downgrade to Neutral," November 1, 2011. (Emphasis added.)

> What's Changed
> Price Target 230p to 220p 2012e/2013e EPS Down 8% / 7% **3Q11 results were better than expected** with clean PBT of £1.3bn vs consensus of ~£1.0bn (though some may question sustainability of hedge gains) **We were also encouraged by improved liquidity buffer and stable 11.0% core tier 1 ratio** so we see value at 0.5x basic TNAV 11e for 9% 2013e RoTE.
>
> **Barclays Capital 3Q11 revenue in-line with expectations.** Revenues of £2.25bn were down 22% q/q in GBP terms, after i-bank peers reported revenues down 30% or more. We model a modest rebound to £2.5bn in 4Q11 then flat revenues in 2012e at £11.0bn.
>
> Hedge gains helped in the quarter. Barclays recorded a hedging gain of £559m and we do not see this as a recurring revenue stream, although many other banks show hedges as core revenue. We calculate Barclays still delivered respectable clean RoTE in 3Q11 of 7% ex-hedge gains and credit market write downs on income of £224m, which do not expect to recur either.
>
> We cut EPS by 8/7% 2012/13e post 3Q11 results based on a) Higher costs: we had expected the 60-65% C:NI ratio target in BarCap to be a challenge in 2011, but the cost base appears more sticky than we anticipated (we now model 67% in 2012e); b) Slower impairment normalization: we now model 77bps impairment charge in 2012e vs 65bps normalised; c) we leave revenue assumptions unchanged.
>
> Valuation at 0.5x basic tangible NAV (Dec 11e 379p) or 0.6x our adj. 11e TNAV **we see Barclays as appealing as earnings revisions stabilize**. We expect a 2013 RoTE of 9% and calculate this could allow BARC to trade at 0.7x TNAV using 11.5% CoE, though clearly resolution of EU sovereign concerns is key to sector performance.[91]

39. Thus, the two November 1, 2011 reports highlighted by Dr. James, do not "conflict with" my conclusions that the "results were better than the market's consensus, and most analysts reacted positively to the earnings results," nor do they undermine my conclusion that the statistically significant positive Company-specific return on October 31, 2011 is consistent with that expected in an efficient stock market.

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[91] Morgan Stanley, "3Q11 results - reassuring but flattered by hedging gains," November 1, 2011. (Emphasis added.)

c. My Finding of Efficiency Is Not Sensitive to My Choice of Regression Model

40. Based on the fact that "two out of nine earnings days that Dr. Nye finds statistically significant in his report are not significant [at the 5% level of significance] when Standard Chartered is included in the industry index,"[92] Dr. James states that my "finding of efficiency is sensitive to [my] choice of regression model."[93] However, while the inclusion of Standard Chartered does change the estimated Company-specific returns for Barclays' London shares, Dr. James fails to mention that the effect is minimal and does not apply to Barclays' ADSs, which are the primary subjects of my market efficiency analysis, as well as the securities at issue in this litigation.

41. As stated in the Nye Report, and not disputed by Dr. James, Standard Chartered cannot be included in the industry index for Barclays' ADSs since its stock did not trade on a U.S. exchange during the Class Period. Specifically, "given time differences between closing prices observed on stock exchanges in different countries, which can bias regression results due to the so called 'nonsynchronous trading effect,' stocks traded on other foreign exchanges [were] excluded from my regression analysis" in the Nye Report.[94] Indeed, neither Dr. James nor I advocate or present any regression model that includes Standard Chartered in the industry index for Barclays' ADSs. Accordingly, Dr. James presents no evidence that my finding of efficiency for Barclays' ADSs is sensitive to the choice of regression model.

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[92] James Report, ¶42.

[93] James Report, Section V.B.1.c).

[94] Nye Report, footnote 128, citing Campell, John Y., Andrew W. Lo and A. Craig MacKinlay, The Econometrics of Financial Markets, Princeton University Press, 1997, 2nd Ed., p. 84. Nonsynchronous trading effects "can create a false impression of predictability in price changes and returns even if true price changes or returns are statistically independent."

42. However, as Standard Chartered traded on the London Stock Exchange during the Class Period, I did consider Standard Chartered when constructing the industry index to be used in the regression model *for the London shares*. As discussed at my deposition, I found that my regression model provides qualitatively similar results whether Standard Chartered is included in the industry index or not.[95] Ultimately, I excluded Standard Chartered "for econometric reasons, …because it would be potentially confounding to have different sets of companies. And… I wanted to create [] symmetry across which companies were considered … in the indices for the two markets."[96]

43. As for the impact Standard Chartered has on my regression model for the London shares, Dr. James fails to mention that the inclusion of Standard Chartered has a minimal effect on the Company-specific returns estimated by the model. As shown in the following table, including Standard Chartered in the industry index causes the estimated Company-specific returns to change by a meager 0.1% on the two days Dr. James focuses his attention, October 31, 2012 and April 24, 2013. I consider these to be qualitatively similar results.

	Company-Specific Return		
Date	**Excluding Standard Chartered**	**Including Standard Chartered**	**Difference**
October 31, 2012	-3.3%	-3.2%	0.1%
April 24, 2013	-2.9%	-2.8%	0.1%

44. With respect to statistical significance, Dr. James also fails to mention that the estimated Company-specific returns on October 31, 2012 and April 24, 2013 are still statistically

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[95] Nye Deposition, p. 102.

[96] Nye Deposition, p. 98.

significant at the 10% significance level, when Standard Chartered is added to the industry index.[97] Not only are such returns relatively rare in that should not be expected to occur more than 10% of the time, but it is clear from the Nye Report that the information flow on these two earnings-release dates was considerable and consistent with the magnitude and direction of the observed Company-specific returns.[98]

45. Generally speaking, the failure of a given Company-specific return to be statistically significant at the 5% level does not demonstrate that my event study methodology is improper or that the results are irrelevant. Indeed, Dr. James' suggestion that informational events must induce a statistically significant price reaction in order to be consistent with market efficiency is incongruous with the fundamental tenets of financial economics. Specifically, the science of financial economics is predicated on 1) the "Law of One Price," which "implies that the price of a security should equal the present value of the expected cash flows an investor will receive from owning it"[99]; 2) the axiom of "semi-strong" form market efficiency, which states that "all publicly available information regarding the prospects of a firm must be reflected already in the stock price"[100]; and 3) arbitrage pricing theory, which posits that stock returns are determined by their systematic risk exposure, "plus another (zero expected value) random amount attributable to firm-specific events."[101] Absent from these widely accepted scientific principles is any

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[97] The p-value of the Company-specific return on October 31, 2012 and April 24, 2013, under the Student's *t*-distribution with 250 degrees of freedom, is 6.0% and 8.3% for the ADSs and London shares, respectively.

[98] Nye Report, Exhibit 11, pp. 16, 17, 20–22.

[99] Berk, Jonathan and Peter DeMarzo, *Corporate Finance*, Pearson Education, Inc., 2007, 1st Ed., Ch. 9, p. 245.

[100] Bodie, Zvi, Alex Kane and Alan J. Marcus, *Investments*, McGraw-Hill/Irwin, 2008, 7th Ed., Ch. 11, p. 361.

[101] *Id.*, pp. 332–345 at p. 332.

reference to statistical significance. The science of financial economics explicitly allows for security prices to efficiently adjust to new information that even minimally affects the "present value of the expected cash flows an investor will receive from owning it," which by definition will not induce a price reaction large enough to qualify as being statistically significant.

46. By design, the calculation of statistical significance does not entail any analysis of company-specific news. Thus, while statistical significance may be an objective manner in which to establish whether a return is extreme enough to be considered rare, it is not a sufficient condition to imply market efficiency. As "the goodness or badness of a hypothesis cannot be decided on merely statistical grounds,"[102] the determination of whether a company-specific return is consistent with market efficiency requires the consideration of both statistical significance ***and news***.[103]

d. My Examination of the Corrective Disclosure Date Is Supportive of Market Efficiency

47. Dr. James states that including the corrective disclosure as an event date "adds little evidence to the finding of efficiency."[104] However, Dr. James does not dispute the fact that new material information regarding Barclays was released on June 25–26, 2014, nor that the price decline on June 26, 2014 is consistent with market efficiency.[105] My analysis of this date was independent of the fact that the "Second Amended Complaint explains that there was a large

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[102] McCloskey, Donald N., 1985, "The Loss Function Has Been Mislaid: The Rhetoric of Significance Tests," *The American Economic Review,* Vol. 75, No. 2, Papers and Proceedings of the Ninety-Seventh Annual Meeting of the American Economic Association, p. 203.

[103] Bodie, Zvi, Alex Kane and Alan J. Marcus, *Investments*, McGraw-Hill/Irwin, 2008, 7th Ed., Ch. 11, pp. 366–368.

[104] James Report, ¶48

[105] James Deposition, pp. 166–168.

ADS price decline on that day."[106] Dr. James states that "examining a single disclosure day does not demonstrate efficiency throughout a three year putative class period." However, as he knows, the corrective disclosure date is one of 38 dates throughout the Class Period that I examined.

e. My Examination of Twenty-One Days with Conferences and Presentations Is Supportive of Market Efficiency.

48. Dr. James states that my examination of Barclays' dates of events and presentations "cannot be used to show that the market for Barclays' ADS is efficient" because "they do not contain material new information."[107] However, the fact that the company-specific returns on these dates were statistically insignificant is supportive of my conclusion that the market for Barclays' stock was efficient.[108] Efficient stock prices should not react significantly to stale and/or immaterial information that does not alter investors' expectations of future cash flows and/or the systematic risk of the firm. Given that the information released on these dates did not contain material new information, and that in general, there was little to no news commentary and/or analyst reports on these dates, the statistically insignificant Company-specific return on these dates is consistent with that expected in an efficient stock market. Furthermore, an examination of event dates with "no news" is often conducted by both plaintiff and defense experts in securities litigation when analyzing market efficiency.[109]

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[106] James Report, ¶48.

[107] James Report, ¶50.

[108] Nye Report, ¶66.

[109] *See, e.g.*, *McIntire v. China MediaExpress Holdings, Inc.*, 2014 WL 4049896 (S.D.N.Y. Aug. 15, 2014); and Tabak, David, "Use and Misuse of Event Studies to Examine Market Efficiency," NERA Economic Consulting, April 30, 2010.

VI. Damages Can Be Measured on a Class-Wide Basis

49. The analyses set forth in the Nye Report establish a foundation for estimating damages on a class-wide basis. Specifically, by controlling for changes in market and industry effects, the event study set forth in the Nye Report isolates the price change of the stock due to the release of Barclays-specific information on every day of the Class Period, including the alleged corrective disclosure date. Thus, as the decline in a security's price in response to corrective disclosures and/or the materialization of a concealed risk reflects the dissipation of price inflation created by earlier misrepresentations and/or omissions, such company-specific price changes are the natural starting point from which to measure the level of price inflation present during the Class Period.

50. As described in the Nye Report, while to date I have not conducted an analysis of loss causation or calculated class-wide damages in this matter, a damages methodology that can be commonly applied to the Class involves measuring the abnormal return in response to the alleged corrective disclosure, in this case June 26, 2014, adjusting for any confounding news, and then applying the constant dollar method to calculate the amount of inflation throughout the Class Period. Given that Plaintiffs' theory of the case is that the false statements and omissions regarding Barclays' operation of LX artificially maintained the stock price, and that this inflation was removed from the ADS price following the corrective disclosure on June 25, 2014 as reflected in the price change on June 26, 2014, it is clear that their theory of liability matches their theory of damages.

51. Defendants fail to provide any evidence contradicting my opinion that "out-of-pocket" damages in this matter can be calculated formulaically on a class-wide basis using a method that is common to the class and consistent with Lead Plaintiffs' theory of liability. Dr. James' criticism that Lead Plaintiffs must put forth the precise mechanisms by which any confounding information can be identified and disaggregated, in order to determine the precise level of price

inflation on each day during the Class Period,[110] requires an assessment of loss causation, which I understand is not required at this stage of the litigation,[111] as well as foresight of the ultimate liability verdict in this matter. These elements are necessarily common among all class members.

VII. Defendants Have Not Put Forth an Analysis of Price Impact and Their Assertions That My Event Study and Testimony Demonstrates a Lack of Price Impact Are Baseless

52. Defendants have not proffered any evidence suggesting a lack of price impact. Dr. James has not conducted his own independent event study, nor has he otherwise directly addressed price impact. Instead, Defendants contend that my event study and testimony establish a lack of price impact.[112] When pressed at deposition, Dr. James states that his analysis of price impact is contained in paragraphs 68, 72 and 73 of his report.[113] However, paragraphs 68, 72 and 73 to the James Report contain no such analysis, rather, they just contain misleading assertions regarding my report and testimony. Indeed, paragraph 68 to the James Report asserts that "*Dr. Nye's explanation* for when inflation due to the allegations entered Barclays' ADS price is inconsistent with the fact pattern in this case." In paragraph 72 to his report, Dr. James opines that *my testimony* that inflation entered Barclays' ADS price prior to the putative class period is inconsistent with Judge Scheindlin's ruling that "the alleged misstatements about LX could only have been material to investors after Barclays' statement regarding committing to 'restoring its

[110] James Report, ¶¶67, 68, 75.

[111] *Erica P. John Fund, Inc. v. Halliburton Co.*, No. 09-1403, 563 U.S. 7 (2011) (June 6, 2011).

[112] Defendants' Opposition to Class Certification, Section I.A. entitled "The Alleged Misstatements Did Not Affect the Price of Barclays' ADS," pp. 8–17.

[113] James Deposition, pp. 197–203.

integrity' following the June 27, 2012 announcement of the LIBOR settlement."[114] In paragraph 73 to his report, Dr. James opines that "if the allegations impacted Barclays' ADS price at the time each alleged misstatement was made, and not prior to the putative class period, then *Dr. Nye must show* that he will be able to calculate the incremental inflation resulting from each distinct alleged misstatement." Indeed, nowhere does the James Report present an independent conclusive analysis of price impact.

53. In addition, the event study presented in the Nye Report was designed to examine whether or not the market for Barclays' stock was efficient during the Class Period, it was not designed to examine loss causation. Nevertheless, the absence of a statistically significant price increase on alleged misrepresentation dates by no means negates the presence of price inflation in a security. One would not expect dates of misrepresentations to necessarily coincide with significant price increases given that dates of misrepresentations may concern omitted material facts and/or confirmed prior market expectations. Indeed, misstatements and/or material omissions can maintain or introduce artificial inflation even if they are not associated with a statistically significant price increase.[115] It is my understanding that Plaintiffs allege that Defendants' misstatements began as early as August 2011 (the start of the Class Period)[116] and that they "maintained the price of Barclays' common stock at levels which reflected investor confidence in the integrity of the company."[117]

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[114] It is my understanding from Counsel that Plaintiffs dispute Defendants' interpretation of Judge Scheindlin's ruling in the April 24, 2015 Opinion and Order on this subject matter.

[115] James Deposition, p. 206 ("Q. Can the omission of a material fact introduce inflation into the stock price? A. Sure.")

[116] Complaint, ¶122.

[117] Complaint, ¶113. *See also, e.g.*, Complaint ¶¶116, 210.

54. Defendants are likewise incorrect when they argue that "Plaintiffs' own evidence sets forth a probable explanation for the June 26, 2014 decline in Barclays' ADS price unrelated to the correction of any alleged misstatement"[118] First, Defendants have once again based their conclusions on analyses contained on the Nye Report, as opposed to conducting their own independent analysis. Second, it is my understanding that Defendants' contentions about what did or did not cause the June 26, 2014 price decline in Barclays' stock, and whether such declines are recoverable under Plaintiffs' theory of liability, are arguments relevant to loss causation, not price impact.

55. Thus, putting aside the fact that Defendants fail to present any independent conclusive analysis of price impact, contrary to their assertions, my report and testimony are not evidence of lack of price impact for Barclays' stock. As described in Section VII. of the Nye Report, the statistically significant Company-specific price decline on June 26, 2014 in response to the alleged corrective disclosure clearly demonstrates the price impact of the alleged misrepresentations described in the Complaint.

[118] Defendants'' Opposition to Class Certification, p. 11.

56. My work in this matter is ongoing. My opinions in this report are subject to refinement or revision based on analysis of new information which may be provided to me, including the opinions of other experts and receipt of additional documents and data, and based on further analysis of the data and materials described herein. Should additional relevant information be provided to me, my opinions may be supplemented at a later date.

Executed on October 26, 2015, at Redwood City, California.

Zachary Nye, Ph.D.